

**UNIVERSITY OF RHODE ISLAND**  
**Department of Chemistry**  
**SEMINAR**

**Room 105 Beupre Center**  
**10:00 a.m., Monday, December 16, 2019**

***Addison Desnoyer***

***UC Berkeley***

***“The Molecule In The Middle: Using  
Fundamental Organometallic Reactions To  
Improve Catalytic Transformations”***

**HOST**

***Matthew Kiesewetter***  
***Department of Chemistry***  
***401-874-2619***

## **The Molecule In The Middle: Using Fundamental Organometallic Reactions To Improve Catalytic Transformations**

Studying the individual steps that drive a catalytic transformation allows synthetic chemists to rationally design chemical reactions that are more efficient, cost-effective and environmentally friendly. This seminar will present the efforts to isolate reactive intermediates commonly invoked, but rarely observed, in catalytic transformations. In particular, the synthesis, structure, and mechanism of formation of the first well-defined 2-nickela(II)oxetanes will be discussed, as well as how the insights gained from these studies were used to develop functionalization reactions of small organic molecules. Additionally, the design of a dicopper platform that models proposed intermediates in Chan-Lam-Evans coupling and their C-N bond-forming reactivity will be described.